PERSONA CIÈNCIA EMPRESA
UNIVERSITAT RAMON LLULL

Title: Conversion of carbon dioxide to added value products in plasma reactor.

Place: IQS. GESPA research group laboratory
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Summary: One alternative for CO_2 utilization is the conversion into added-value products. In this experimental project, different operational conditions and catalysts in a dielectric barrier discharge (DBD) plasma reactor will be carried out in order to optimize the CO_2 conversion.
The student will carry out experiments to carry out a parametric study of operational parameters within the plasma reactor. The student will try to optimize energy consumption, conversion and selectivity to added value products. This will be done with two DBD plasma reactors.
The student will carry out experiments for the conversion to added value products such as methanol, methane while optimizing energy consumption, conversion and selectivity. This will be done with DBD plasma reactor:

- Gained an understanding of alternatives for CO2 conversion with plasma reactor.
- Learned how to use assemble, start-up and run the plasma reactor.
- Start-up and use gas chromatography for outlet analysis.
- Improved presenting skills and technical report writing skills.
- Critically analysed results to find out optimal operational conditions in terms of energy consumption, conversion and selectivity.